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JOHN B. CIZMAR

**APPLICATION FOR
UNITED STATES LETTERS PATENT**

S P E C I F I C A T I O N

TO ALL WHOM IT MAY CONCERN:

Be it known that I, **Marissa A. K. Schultz**, a citizen of the United States, residing at 5491 Short Road, Racine 53402, in the County of Racine and State of Wisconsin, have invented a new and useful **HOLDING DEVICE FOR THERMOPLASTIC LIDS**, of which the following is a specification.

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HOLDING DEVICE FOR
THERMOPLASTIC LIDS

Technical Field

5 The present invention relates to thermoplastic containers and lids, and more particularly to a device for holding and stacking thermoplastic lids.

Background of the Invention

10 The use of containers for the storage of items is well known. Such containers are used to store a variety of articles, from food to general household items including everything from craft supplies to children's toys. Generally, such containers can be characterized by shape and size. Containers that do not include a lid require a separate sealing member, such as a plastic wrap or aluminum foil. Often, the plastic wrap or aluminum foil is loose or jostled during movement of the container, and hence, the
15 container is usually not properly sealed or closed to prevent contents therein from spilling. Containers that include lids overcome this problem.

 As is well known, many different types and sizes of container lids exist. When such container lids are placed together in a confined space, such as a cupboard, cabinet, drawer, shelf, refrigerator, or the like, a disorganized condition can develop, preventing a
20 user from easily locating a container lid of a particular size and shape. Further, as a user is attempting to locate a particular container lid, other items may be jostled, thereby causing a container lid or one or more of the items to fall off a supporting surface to the floor, resulting in breakage of the items and/or spilling of contents and/or lost container lids. Still further, when container lids are stacked on top of each other in an unconfined
25 location, the container lids tend to slide out of the stacked configuration and into a disorganized state making it difficult to locate the proper size and/or shaped container lid.

 Staver U.S. Patent No. 3,192,894 discloses a support for an article. The support includes a back surface for attachment to a vertical surface and a surface having a single opening to facilitate engagement of the article in cooperation therewith. A stem portion of
30 the article is placed in the opening for suspension therefrom.

Princevalle U.S. Patent No. 3,326,387 discloses a portable lid holder for supporting lids of the type commonly used in cover baking glassware in a generally vertical position.

Hoffman U.S. Patent No. 5,297,766 discloses a pot lid holder. The pot lid holder includes a main body with a single outwardly opening slot located at one end of the main
5 body through which a vertically extending handle of a lid may be suspended therefrom.

D'Angelo U.S. Patent No. 6,364,125 discloses a device capable of organizing and storing a variety of items. The device includes a base, a primary tubular member, one or more hollow tubular storage members, one or more hollow tubular delivery members, and one or more collection compartments.

10 Kolton et al. U.S. Patent No. 6,561,358 discloses a hanger for an article display container and a container lid. When using the hanger, a user inserts a portion of the hanger into an open end of the container and places the container lid adjacent a closed end of the container and in pressure relationship with another portion of the hanger, such that the container and lid are held therein.

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Summary of the Invention

In accordance with one aspect of the present invention, a holding device includes a first wall including a first cutout portion and a second wall including a second cutout
20 portion intersecting the first wall at an angle less than 180 degrees. The cutout portions are operable to hold an object adjacent the first and second walls.

In accordance with a further aspect of the present invention, a holding device for a thermoplastic lid includes a first wall including a first cutout portion and a second wall including a second cutout portion intersecting the first wall at an angle less than 180
25 degrees. The device further includes at least one connecting portion extending perpendicularly from and connecting the first and second walls through the angle and at least one ridge extending perpendicularly from a rear side of one of the walls.

In accordance with yet another aspect of the present invention, a combination includes a holding device for stacking thermoplastic container lids including first and second intersecting planar walls, wherein each of the walls includes a cutout portion. The

combination further includes at least one thermoplastic lid disposed between the cutout portions of the walls and held in place therein.

5 In accordance with still another aspect of the present invention, a method of holding thermoplastic container lids includes the step of providing a holding device for holding thermoplastic container lids including first and second intersecting planar walls, wherein each of the walls includes a cutout portion. The method further includes the step of placing thermoplastic container lids between the cutout portions of the first and second walls.

10 Other aspects and advantages of the present invention will become apparent upon consideration of the following detailed description and the attached drawings, in which like elements are assigned like reference numerals.

Brief Description of the Drawings

15 FIG. 1 is an isometric view of a first embodiment of the present invention;
FIG. 2 is an elevational view of the embodiment of FIG. 1 taken from the top thereof (as oriented in the fashion shown in FIG. 1);
FIG. 3 is a side elevational view of an undersurface of the wall 32 of FIG. 1 the embodiment of FIG. 1;
20 FIG. 4 is an isometric view of the embodiment of FIG. 1 disposed in an orientation resting on a surface and with a thermoplastic container lid held therein;
FIG. 5 is an elevational view of the embodiment of FIG. 1 disposed in a further orientation and mounted to a vertical surface;
FIG. 6 is a side elevational view of a further embodiment of the present invention mounted to a horizontal surface and illustrating an inside surface of the wall 34;
25 FIG. 7 is an isometric view similar to FIG. 1 of a further embodiment of the present invention;
FIG. 8 is an elevational view similar to FIG. 2 of the embodiment of FIG. 7;
FIG. 9 is an isometric view similar to FIG. 1 of a further embodiment of the present invention;
30 FIG. 10 is an elevational view similar to FIG. 2 of the embodiment of FIG. 9; and

FIG. 11 is an isometric view similar to FIG. 1 of a further embodiment of the present invention.

Description of the Preferred Embodiments

5 Referring now to FIGS. 1-4, a first embodiment of a holding device 30 of the present invention includes a first wall 32 and a second wall 34 joined to and integral with the first wall 32 at a joint portion 36. Each of the first and second walls 32, 34 has a width W1 and a length L1 (FIGS. 1 and 3). The length L1 is preferably between about 3.5 inches (88.9 mm) and about 15.0 inches (381 mm), and more preferably between about 4.25 inches (107.95 mm) and about 8.0 inches (203.2 mm), and most preferably about 4.625 inches (117.475 mm). Further, the width W1 is preferably between about 3.0 inches (76.2 mm) and about 15.0 inches (381 mm), and more preferably between about 3.75 inches (95.25 mm) and about 8.0 inches (203.2 mm), and most preferably about 4.240 inches (107.696 mm). The width W1 could optionally be greater depending on the preferred capacity of lids of the holding device 30. Also optionally, the length L1 may be greater depending on the size of lids to be held in the holding device 30. Although the first and second walls 32, 34 are shown as having the same dimensions, this need not be the case. The holding device 30 is preferably manufactured as a single piece, but may be manufactured as separate pieces and assembled by the manufacturer or by the consumer.

15 The first and second walls 32, 34 are disposed at an angle 41 with respect to one another. A first connecting portion 38 joins the first and second walls 32, 34 at first and second edge portions 40a, 40b of the first and second walls 32, 34, respectively, and extends over (i.e., spans) the angle 41. Preferably, but not necessarily, the angle is 90 degrees or less, but may be any angle, preferably one less than 180 degrees. The first connecting portion 38 is preferably polygonal in shape and is preferably rectangular, square-shaped, or triangular-shaped, (or other polygonal shape) but may also be circular, oval-shaped, or any other regular or irregular shape. A second connecting portion 42 joins the first and second walls 32, 34 at third and fourth edge portions 40c, 40d of the first and second walls 32, 34, respectively. The second connecting portion 42 is preferably the same shape as the first connecting portion 38, but may instead have a shape different from

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the first connecting portion 38. The first and second connecting portions 38, 42 are optional, but their primary purpose is to help prevent the lids from falling out of the holding device 30. Secondary and tertiary purposes of the connecting portions 38, 42 are to stabilize the holding device 30 and to connect the holding device to a surface.

5 In a preferred embodiment, as seen in FIGS. 1-4, the first and second connecting portions 38, 42 are both of the same size and are both generally square-shaped. A width W2 and a length L2 of the connecting portions 38, 42 are preferably between about 1.5 inches (38.1 mm) and about 5.0 inches (127 mm), and more preferably between about 2.250 inches (57.15 mm) and about 3.250 inches (82.55 mm), and most preferably about 2.750 inches (69.85 mm). It should be noted that the connecting portions 38, 42 can be
10 any size depending on the size of the first and second walls 32, 34 and the size of lids to be held in the holding device 30.

Preferably, one or both of the first and second connecting portions 38 and 42 include means for mounting the holding device 30 to a horizontal surface 43 (FIGS. 1, 5
15 and 6). Alternatively, the holding device 30 may be placed on a horizontal surface 43a seen in FIG. 4. As seen in the embodiment of FIGS. 1 and 2, the first connecting portion 38 includes at least one and preferably at least two mounting holes 39a, 39b. Further, mounting holes 39 may be placed at any location on the connecting portions 38 and/or 42. One or both of the first and second connecting portions 38 and 42 may also or
20 alternatively include other mounting means including, but not limited to, hook and loop (i.e., Velcro) fasteners, double sided tape (FIG. 9), an adhesive, or the like, disposed on an outside surface 41 of the first and/or second connecting portions 38 and 42.

As seen in FIGS. 1 and 3, the first and second walls 32, 34 include first and second cutout portions 44, 46, respectively. The cutout portions 44, 46 are preferably step-
25 shaped, but may also be any shape including, but not limited to, square-shaped, rectangular-shaped, triangular-shaped (or any other polygonal shape), circular-shaped, oval-shaped, or any other regular or irregular shape. Preferably, the step-shaped cutout portions 44, 46 are generally centered between the first and second connecting portions 38, 42 and include first and second base portions 48a, 48b that are perpendicular to one
30 another. The step-shaped cutout portions 44, 46 further include step sections 50a-50c that

are perpendicular to the first base portion 48a and step sections 50d-50f that are parallel to the first base portion 48a.

Lids of identical or different shapes and sizes are disposed in the holding device 30 such that each lid rests against both of the second base portions 48b and both of the step sections 50a, or both of the step sections 50b, or both of the step sections 50c. When disposed therein, the cutout portions 44, 46 allow the lids to protrude therethrough such that any suitably shaped and/or sized lid can be held by the holding device 30. It should be noted that the cutout portions 44, 46 are preferably (although not necessarily) substantial mirror images of one another and that the portions 44,46 are disposed sufficiently close to one another to properly support the particular lids in question. The main purpose of the cutout portions 44, 46 of the present invention is to eliminate the need for a fully enclosed container to hold the lids, thereby reducing the amount of needed material for the holding device 30.

Each of the step sections 50d and 50e includes a divider 52a, 52b extending generally parallel to the portions 38 and 42 at the respective step section 50d or 50e. The dividers 52a, 52b also preferably extend inwardly away from the respective walls 32, 34. Each of the dividers 52a, 52b preferably is capable of supporting one or more thermoplastic container lids. The dividers 52a, 52b also preferably separate different sizes and shapes of lids disposed therein. Although FIGS. 1-4 depict an embodiment of the holding device 30 having two dividers 52a, 52b, a single divider or more than two dividers may be employed. Although the dividers 52a, 52b are illustrated as rectangular and tapered, the dividers 52a, 52b may assume any shape including triangular, semi-circular, etc.

As seen in FIGS. 1 and 2, the holding device 30 further includes a flange or ridge 60 extending at an angle 62 from the second wall 34. The angle 62 is preferably, although not necessarily, less than or equal to 90 degrees, but the angle 62 may be any angle preferably less than 180 degrees. A length L3 of the ridge 60 is preferably slightly less than the length L1 of the walls 32, 34, but the length L3 could be the same as the length L1 or longer than or much shorter than the length L1. Preferably, a width W3 of the ridge 60 (FIG. 2) and the angle 62 between the horizontal surface 43a (FIG. 4) and the wall 34

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are large enough to allow lids to protrude through the cutout portion 44 without touching the horizontal surface 43a.

Referring to FIG. 4, the consumer could place the holding device 30 in a first orientation on the horizontal surface 43a (which may, for example, be a countertop) with the ridge 60 and joint portion 36 of the holding device 30 resting on the surface 43a. Lids can then be placed in the holding device 30 between the cutout portions 44, 46, preferably adjacent and/or supported by the portions 38, 42 and/or the dividers 52, to hold the lids in place. The holding device 30 of the present invention preferably, although not necessarily, includes at least one ridge 60 extending from the first and/or second walls 38, 42. The embodiment of FIGS. 1-4 depicts a holding device 30 including a ridge 60 extending from the first wall 38, but the ridge 60 may also extend from the second wall 42 or both walls 38, 42 (FIGS. 5 and 6). The ridge 60 is preferably rectangular in shape, although it may be any polygonal shape, regular shape, or irregular shape.

Optionally, as seen in FIG. 9, one or more small ridges 61 may replace the ridge 60. The small ridges 61 are preferably rectangular in shape, but alternatively may be any polygonal shape, regular shape, or irregular shape.

As seen in FIG. 4, a consumer may attach any of the holding devices 30 described herein to a surface by any of the mounting means discussed herein or position the holding device 30 on a flat surface in the first orientation as discussed above. Thereafter, the user can insert a thermoplastic container lid 70 into the holding device 30 by placing a rim 72 of the lid 70a through the cutout portions 44, 46 and allowing the lid 70a to rest on or adjacent the divider 52b, as seen in FIG. 4. The user can further stack other lids 70 on top of or adjacent the lid 70a or on top of divider 52a. Any shape of thermoplastic container lid 70 may be stacked in the holding device 30, such as oval-shaped, circular-shaped, square-shaped, rectangular-shaped or any other polygonal shape, regular shape, or irregular shape.

The holding device 30 can alternatively be attached to a vertical surface as seen in FIG. 5 and suspended therefrom using any of the mounting means as discussed herein. In attaching the holding device 30 to a vertical surface, the holding device 30 may be angled such that the joint 36 is substantially coincident with a horizontal line 45a (seen end-on in

FIG. 5), and the first and second walls 32, 34 form angles 47, 49, respectively, with respect to a horizontal line 45b perpendicular to the horizontal line 45a. The angles 47, 49 are both preferably about 45 degrees, but the angles 47 or 49 may be different, if desired. Preferably, both of the angles 47, 49 are large enough to prevent lids from falling out of the holding device 30.

The embodiment of FIG. 6 depicts the holding device 30 as attached by any of the mounting means previously described to an undersurface or top of a horizontal surface 43c. The user preferably positions the holding device 30 such that the walls 32, 34 are disposed in a manner such that the opening between the walls 32, 34 is easily accessible to the user.

The embodiment of FIGS. 7 and 8 is similar to that of FIG. 6, except that the connecting portion 38 is omitted and the holding device 30 also includes a first flange or ridge 60a extending from the first wall 32 and a second flange or ridge 60b extending from the second wall 34. The second ridge 60b extends from the second wall 34 at an angle 72, which is preferably, although not necessarily, less than or equal to 90 degrees, but the angle 72 may be any angle, preferably less than 180 degrees. Also, the angle 72 is preferably, although not necessarily, the same as the angle 62.

FIGS. 9 and 10 depict a further embodiment of the holding device 30 of the present invention. The holding device 30 of FIGS. 9 and 10 is similar in all aspects to the embodiment of FIGS. 1-4, except that connecting portions 74 and 76 are triangular-shaped and not rectangular-shaped and the connecting portion 76 is shown with double-sided adhesive tape 80 attached thereto for attachment to a surface. Preferably, the triangular-shaped connecting portions 74 and 76 are large enough to retain the lids within and prevent the lids from falling out of the holding device 30.

Any of the holding devices of the present invention may be packaged in a box in combination with the product stored therein, or the holding device may be separately provided, as desired. Where the holding device is packaged in a box, it is preferred that the connecting portions 38 and/or 42 and the joint portion 36 include hinges such that the holding devices may be folded for packaging. Specifically, as seen in FIG. 11, a hinge 82a is disposed in the area between a second edge 84 of the connecting portion 38 and the

second wall 34. Also, a hinge 82b is disposed in the area between a second edge 86 of the connecting portion 42 and the second wall 34. Preferably, first edges 88, 90 of the connecting portions 38, 42, respectively, include tabs 92 that snap into and are retained within openings 94 in the first wall 32. The joint portion 36 further includes a hinge 82c.
5 Preferably, the hinges 82 are formed by thinned portions of the material of the holding device 30.

The holding device 30 is preferably packaged with the connecting portions 38, 42 folded inwardly against the second wall 34 and the second wall 32 folded inwardly against the connecting portions 38, 42 and the second wall 34. In use, a consumer erects the
10 holding device 30 by pulling the first wall 32 outwardly away from the second wall 34 and thereafter pulling the connecting portions 38, 42 outwardly away from the second wall 34. Thereafter, tabs 92 extending from the edges 88, 90 of the connecting portions 38, 42, respectively, are be inserted into the openings 94 in the first wall 32. If necessary, the placement and/or sizes of the dividers 52 and/or the sizes of the connecting portions 38, 42
15 may be varied to permit folding of the device 30 into a compact configuration for packaging.

Optionally, the embodiment of FIG. 11 may be constructed such that the connecting portions 38, 42 and the second wall 34 fold inwardly toward the first wall 32. Hinges, tabs and openings may be added as described above to any of the embodiments
20 disclosed herein to allow the holding device to be folded and placed in a package.

Any of the embodiments of the holding device of the present invention are preferably constructed of a thermoplastic material, but any material may be employed, including, but not limited to, metal, wood, glass, or any other somewhat rigid material.

Industrial Applicability

As should be evident, one may use single or ganged multiple holding devices that are placed on or secured to a vertical support surface, a horizontal support surface or a non-horizontal and non-vertical support surface in any configuration and/or orientation desired by the user so that the lids are maintained in a desired arrangement.

The holding device allows a user to address a variety of home storage problems. The holding device enables a user to store and organize lids for thermoplastic containers to fully utilize available storage space. For example, in a refrigerator, closet, pantry, or the like, the present invention allows a user to hang container lids from the underside of a shelf, thus freeing up the shelf surface space for the storage of other items. This type of use also ensures that the lids are clearly in view and always in the same location, thus increasing the likelihood that any perishable food will be utilized before spoilage occurs.

The holding device of the present invention can be made from any suitable rigid material such as plastic, glass, metal, wood and similar substances. The only important features of the materials of construction are that they be relatively rigid, inexpensive, and can be readily formed into a desired shape. Suitable plastic materials include polypropylene, polyethylene, styrene, nylon, and a wide variety of other similar homopolymers and copolymer materials. Any suitable molding technique can be used to form these devices, including injection molding and thermoforming.

As should be evident, the holding device of the present invention may be of any suitable shape, such as polygonal (triangular, pentagonal, hexagonal, etc...), circular, regular, or irregular shape. The holding device may be packaged in the box in combination with the product stored therein, or the holding device may be separately provided, as desired. Fastening means, such as a section of double-sided adhesive tape, screws, hook and loop fasteners, etc... may also be provided in the box or may be provided separately, as desired.

Numerous modifications to the present invention will be apparent to those skilled in the art in view of the foregoing description. Accordingly, this description is to be construed as illustrative only and is presented for the purpose of enabling those skilled in the art to make and use the invention and to teach the best mode of carrying out the same. The exclusive rights to all modifications which come within the scope of the appended claims are reserved.